

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of generating a navigation transmission ranging signal in a navigation system comprising a carrier signal, the method comprising the step of modulating the carrier signal by at least one subcarrier modulation signal to generate the navigation transmission ranging signal; wherein the at least one subcarrier modulation signal comprises a number, m , of amplitude levels, where $m > 2$.

Claims 2-3 (Canceled).

4. (Previously Presented) A method as claimed in claim 1, wherein m is selected from at least one of 3, 4, 5, 6, 7, 8 or 9.

5. (Previously Presented) A method as claimed in claim 1, wherein at least one of the at least one subcarrier modulation signal approximates or is derived from a predetermined basis waveform.

6. (Previously Presented) A method as claimed in claim 5 in which the basis waveform is at least one of a sine wave, cosine wave, triangular waveform.

7. (Previously Presented) A method as claimed in claim 5 wherein the basis waveform is selected according to desired power distribution characteristics of the transmission signal.

8. (Previously Presented) A method as claimed in claim 1, wherein the at least one subcarrier modulation signal comprises at least two mutually orthogonal subcarrier modulation signals.

9. (Canceled).

10. (Previously Presented) A method as claimed in claim 8, wherein the at least two subcarrier modulation signals comprises a pair of subcarriers having a predetermined phase relationship.

11. (Previously Presented) A method as claimed in claim 1, wherein the at least one subcarrier modulation signal comprises an in-phase subcarrier and a quadrature phase subcarrier.

12. (Previously Presented) A method as claimed in claim 11 further comprising the step of determining from said number, m , of amplitude levels the respective multiple amplitudes of the in-phase and quadrature phase subcarriers to maintain a substantially constant transmission signal envelope.

13. (Previously Presented) A method as claimed in claim 1, further comprising the steps of deriving from said number, m , of amplitude levels the amplitudes associated with the at least one subcarrier modulation signal from a plurality of phase states.

14. (Original) A method as claimed in claim 13, in which the phase states are equally angularly distributed around a unit circle.

15. (Previously Presented) A method as claimed in claim 1, wherein durations of the amplitudes of said number, m , of amplitude levels of the at least one subcarrier modulation signal are substantially equal.

16. (Previously Presented) A method as claimed in claim 1, wherein the durations of the at least a pair of amplitudes of said number, m , of amplitude levels of the at least one subcarrier modulation signal are different.

17. (Previously Presented) A method as claimed in claim 15, wherein the durations are quantized according to an associated clock signal.

18. (Previously Presented) A method as claimed in claim 1, wherein at least a pair of subcarriers cooperate to define an associated plurality of phase states resolved according to mutually orthogonal axes.

19. (Previously Presented) A method as claimed in claim 18, wherein the plurality of phase states is associated with respective ranging signals.

20. (Previously Presented) A method as claimed in claim 18 wherein dwell times in at least some of the plurality of phase states are unequal.

21. (Previously Presented) A method as claimed in claim 18 wherein a first group of the phase states have a first dwell and a second group of the phase states have a second dwell time.

22. (Previously Presented) A method as claimed in claim 18 wherein the dwell times are quantized according to a clock.

Claims 23-97 (Canceled).

98. (Previously Presented) A method as claimed in claim 1, wherein said modulating comprises modulating a ranging signal using a subcarrier signal.

99. (New) A method as claimed in claim 1, further comprising generating the at least one subcarrier modulation signal by mixing at least one ranging signal with at least one subcarrier signal.